STANDARD .062"+™ WIRE TO WIRE

1.0 SCOPE

This Test Summary covers the 3.68 mm centerline (pitch) connector series terminated with 16 to 22 AWG wire using Crimp technology with Tin plating.

2.0 PRODUCT DESCRIPTION

2.1 PRODUCT NAME AND PART NUMBER(S)

DESCRIPTION	SERIES
Standard .062"+ Single Row WTW Plug Housing 1x2	150176
Standard .062"+ Single Row WTW Plug Housing 1x3	
Standard .062"+ Dual Row WTW Plug Housing 2x2	150177
Standard .062"+ Dual Row WTW Plug Housing 2x3	
Standard .062"+ Dual Row WTW Plug Housing 2x4	
Standard .062"+ Dual Row WTW Plug Housing 2x5	
Standard .062"+ Single Row WTW Receptacle Housing 1x2	150178
Standard .062"+ Single Row WTW Receptacle Housing 1x3	
Standard .062"+ Dual Row WTW Receptacle Housing 2x2	150179
Standard .062"+ Dual Row WTW Receptacle Housing 2x3	
Standard .062"+ Dual Row WTW Receptacle Housing 2x4	
Standard .062"+ Dual Row WTW Receptacle Housing 2x5	
Male Crimp Terminal	150180
Female Crimp Terminal	150181

2.2 DIMENSIONS, MATERIALS, PLATINGS AND MARKINGS

REFER SD-150176-001, SD-150177-001, SD-150178-001, SD-150179-001, SD-150181-0001, SD-150180-0001

2.3 PRODUCT SPECIFICATION TITLE AND DOCUMENT NUMBER

1501760001-PS

3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

1.1 TESTING PROCEDURES AND SEQUENCES

Reference Section 6.0 for Test sequence.

1.2 OTHER DOCUMENTS AND SPECIFICATIONS

4.0 QUALIFICATION

Laboratory conditions and sample selection are in accordance with Product spec **1501760001-PS**

5.0 PERFORMANCE

5.1 ELECTRICAL PERFORMANCE RESULTS

ITEM	DESCRIPTION	TREATMENT		REQUIREMENT	MEAN	MINIMUM	MAXIMUM
5.1.1	Contact Resistance (Low level)	Apply Maximum Voltage of 20mV and a current of 100 mA.		10 milliohms MAXIMUM (Initial)	**2.31** mΩ	**1.73** mΩ	**3.19** mΩ
5.1.2	Insulation Resistance	Apply a voltage of 500 VDC between adjacent terminals and between terminals to ground		1000 MegaOhms Minimum	Meets the Requirement		
5.1.3	Dielectric Withstanding Voltage	Apply Voltage of 1500 VAC for 1 minute between adjacent terminals and between terminals to Ground.		No Break down	Meets the Requirement		
				Current leakage < 5 mA	Meets the Requirement		
5.1.4	Temperature Rise (via Current Cycling) [+30ºC Rise above ambient]	**1 Circuit**	**16** AWG	+30 °C MAXIMUM RISE above ambient	***30°C @ 11.5 amps**		
			18 AWG		***30°C @ 8.5 amps**		
			20 AWG		***30°C @ 7.5 amps**		
			22 AWG		***30°C @ 6.5 amps**		
		2 Circuit	**16** AWG		**30°C @ 11.5 amps**		
			18 AWG		***30°C @ 8.5 amps**		
			20 AWG		***30°C @ 7.5 amps**		
			22 AWG		**30°C @ 6.5 amps**		
		3 Circuit	**16** AWG		***30°C @ 10 amps**		
			18 AWG		***30°C @ 7 amps**		
			20 AWG		***30°C @ 6 amps**		
			22 AWG		***30°C @ 5.5 amps**		
		4 Circuit	**16** AWG		***30°C @ 9 amps**		
			18 AWG		***30°C @ 6.5 amps**		
			20 AWG		***30°C @ 5.5 amps**		
			22 AWG		***30°C @ 5 amps**		
		6 Circuit	**16** AWG		**30°C @ 8.5 amp**		
			18 AWG		***30°C @ 6.5 amps**		
			20 AWG		***30°C @ 5.5 amps**		
			22 AWG		**30°C @ 5.0 amps**		
		8 Circuit	**16** AWG		***30°C @ 8 amps**		
			18 AWG		***30°C @ 6 amps**		
			20 AWG		***30°C @ 5 amps**		
			22 AWG		***30°C @ 4.5 amps**		
		10 Circuit	**16** AWG		**30°C @ 7.5 amps**		
			18 AWG		***30°C @ 6 amps**		
			20 AWG		***30°C @ 5 amps**		
			22 AWG		**30°C @ 4.5 amps**		

*Interpolated Values

5.1 ELECTRICAL PERFORMANCE RESULTS (continued)

ITEM	DESCRIPTION	TREATMENT		REQUIREMENT	MEAN	MINIMUM	MAXIMUM
5.1.5	18-day Current cycling EIA-364-55	2 Circuit	**16 AWG**	+30 °C MAXIMUM RISE above ambient	11.5 A @29.7° C		
			22 AWG		6.5 A @28.39°C		
		10 Circuit	**16 AWG**		7.5 A @28.33°C		

5.2 MECHANICAL PERFORMANCE RESULTS

ITEM	DESCRIPTION	TREATMENT	REQUIREMENT	MEAN	MINIMUM	MAXIMUM
5.2.1	Connector Mate and Un mate Forces 2 CKT	Mating Initial	**9** N/ CKT MAXIMUM (**2.02** lb_f) MAXIMUM	**7.86** N (**1.77** lb_f)	**7.47** N (**1.68** lb_f)	**8.47** N (**1.90** lb_f)
		Un-mating Initial	**4.5** N/CKT MINIMUM (**1.10** lb_f) MINIMUM	**13.17** N (**2.96** lb_f)	11.55 N (**2.60** lb_f)	**16.67** N (**3.75** lb_f)
5.2.2	Connector Mate and Un mate Forces 10 CKT	Mating Initial	**9** N/ CKT MAXIMUM (**2.02** lb_f) MAXIMUM	**5.51** N (**1.24** lb_f)	**4.95** N (**1.11** lb_f)	**5.87** N (**1.32** lb_f)
		Un-mating Initial	**4.5** N/CKT MINIMUM (**1.10** lb_f) MINIMUM	**5.59** N (**1.26** lb_f)	**4.84** N (**1.09** lb_f)	**6.02** N (**1.35** lb_f)
5.2.3	Terminal Retention Force (in Housing)	Initial	**26** N MINIMUM (**5.84** lb_f) MINIMUM	**77.67** N (**17.46** lb_f)	**26.97** N (**6.06** lb_f)	**123.33** N (**27.72** lb_f)
5.2.4	Durability	See Section 6.0 test Sequences. Group1/2/3/7	10 milliohms Max. (change from Initial)	**0.09mΩ**	**-0.22 mΩ**	**1.33 mΩ**
5.2.5	Vibration (Random)	See Section 6.0 test Sequences. Group 3	10 milliohms Max. (change from Initial)	**0.24 mΩ**	**-0.135 mΩ**	**0.79mΩ**
			Discontinuity<1 microsecond	Meets the Requirements		
5.2.6	Shock (Mechanical)	See Section 6.0 test Sequences. Group 3	10 milliohms Max. (change from Initial)	**0.555 mΩ**	**-0.013 mΩ**	**2.47mΩ**
			Discontinuity<1 microsecond	Meets the Requirements		
5.2.7	Wire Pullout Force (Axial)	**16** AWG	**89** N MINIMUM (20 lb_f) MINIMUM	**202.38** N (**45.49** lb_f)	**192.13** N (**43.19** lb_f)	**220.27** N (**49.51** lb_f)
		18 AWG	**89** N MINIMUM (**20** lb_f) MINIMUM	**180.25** N (**40.52** lb_f)	**151.13** N (**33.97** lb_f)	**199.30** N (**44.80** lb_f)
		20 AWG	**36** N MINIMUM (**8** lb_f) MINIMUM	**132.34** N (**29.75** lb_f)	**107.24** N (**24.10** lb_f)	**143.50** N (**32.26** lb_f)
		22 AWG	**36** N MINIMUM (**8** lb_f) MINIMUM	**85.77** N (**19.28** lb_f)	**75.08** N (**16.87** lb_f)	**94.46** N (**21.23** lb_f)
5.2.8	Terminal Insertion Force (into Housing)	Initial	**11** N MAXIMUM 2.47 lb_f) MAXIMUM	**8.29** N (**1.86** lb_f)	**5.79** N (**1.16** lb_f)	**10.36** N (**2.32** lb_f)
5.2.9	Panel Insertion Force	Insertion	**52** N MAXIMUM (**11.69** lb_f) MAXIMUM	**25.51** N (**5.73** lb_f)	**18.85** N (**4.23** lb_f)	**32.06** N (**7.20** lb_f)

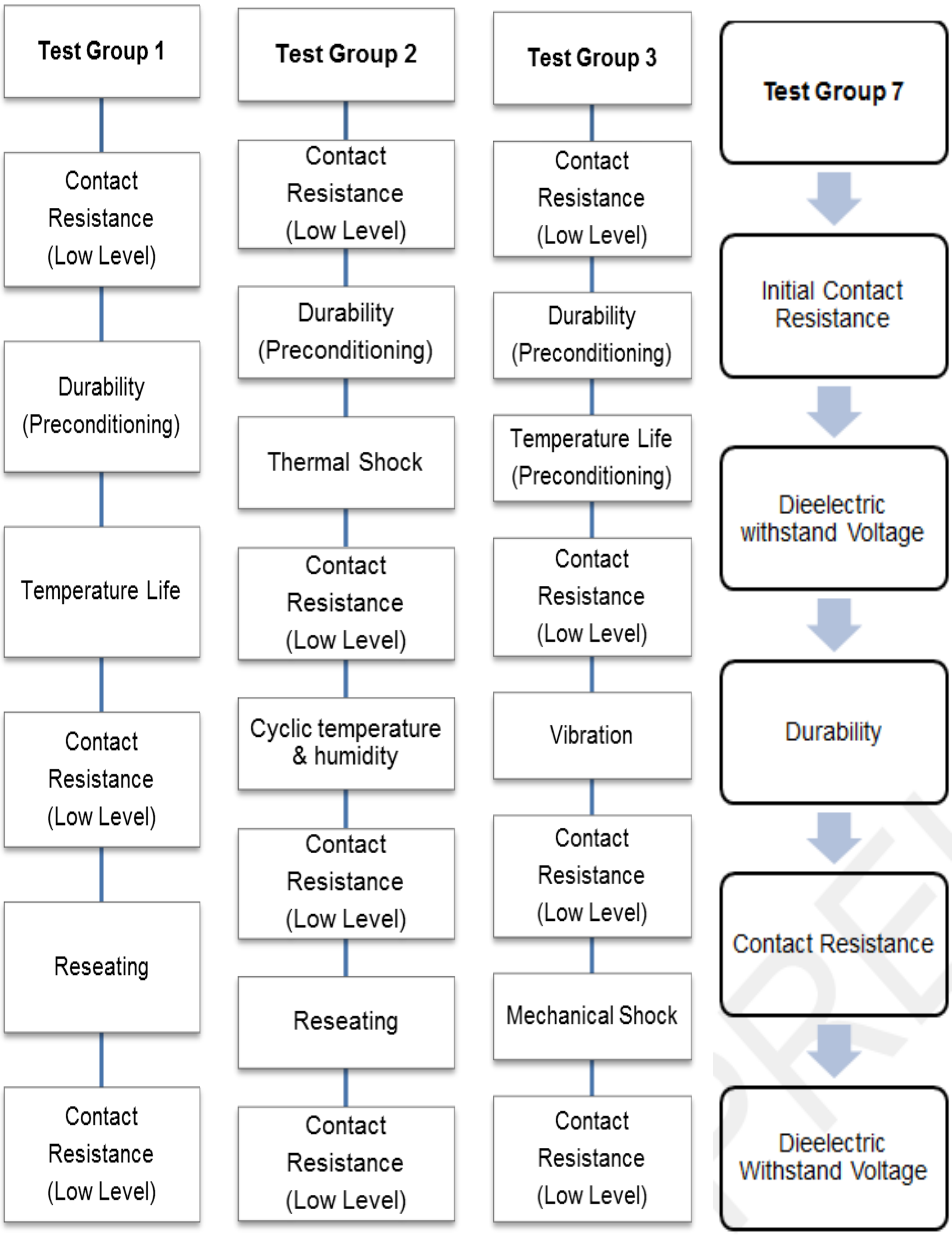
5.2 MECHANICAL PERFORMANCE RESULTS (continued)

ITEM	DESCRIPTION	TREATMENT	REQUIREMENT	MEAN	MINIMUM	MAXIMUM
5.2.10	Latch Retention Force with panel	Initial	**200** N MINIMUN (**44.97** lb_f) MINIMUM	219.27 N (**49.29** lb_f)	**211.14** N (**47.47** lb_f)	**228.55** N (**51.38** lb_f)
5.2.11	Impact on Housing	Drop housing from **1**meter height	No breakage/damage	Result: Meets the requirement		

5.3 ENVIRONMENTAL PERFORMANCE RESULTS

ITEM	DESCRIPTION	TREATMENT	REQUIREMENT	MEAN	MINIMUM	MAXIMUM
5.3.1	Temperature life	See Section 6.0 test Sequences. Group1	10 milliohms Max. (change from Initial)	**-0.01 mΩ**	**-0.19 mΩ**	**0.12 mΩ**
			Visual : No Damage	Pass		
5.3.2	**Shock (Thermal)** Group 2)	See Section 6.0 test Sequences. Group2	10 milliohms Max. (change from Initial)	**0.041 mΩ**	**-0.16 mΩ**	**0.24 mΩ**
			Visual : No Damage	Pass		
5.3.3	**Humidity (Cyclic)** Group 2	See Section 6.0 test Sequences. Group2	10 milliohms Max. (change from Initial)	**0.054 mΩ**	**-0.165 mΩ**	**0.29 mΩ**
			Die-Electric withstanding voltage: No breakdown at 500VAC	Meets the Requirements		
			Insulation Resistance: 1000Megaohms Minimum	Meets the Requirements		
			Visual : No Damage	Pass		

6.0 TEST SEQUENCES



Note: Temperature life preconditioning applied in Test group-3 is 105^{0}C for 132 hours.